

## DETAILED ACTION

### *EXAMINER'S AMENDMENT*

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Katharina W. Schuster, Reg. No. 50,000 on 6/19/2008.

2. Replace claim 1 with the following (shown ***marked up*** here, followed by *clean version*):

1. A method of supporting a kernel comprising:

implementing

a kernel driver application and

a bridge driver

at a kernel layer

loaded into a main memory of a computer,

wherein

the kernel driver application

~~is capable of initiating~~ initiates requests and

the bridge driver

~~is capable of communicating the~~ communicates requests  
with at least one user space application  
residing at a user space;  
at the kernel layer,  
receiving a request for processing from  
the kernel driver application;  
forwarding the request for processing  
to a user space application;  
at the user space,  
receiving the request for processing;  
processing the request in  
the user space  
to generate a response  
based on the request; and  
communicating the response to  
the bridge driver at  
the kernel layer.

3. The method of Claim 1, wherein  
the bridge ~~drive is further capable of~~ driver  
~~opening~~ opens a communications channel between  
the kernel layer and

the user space.

***Clean claim version:***

1. A method of supporting a kernel comprising:  
implementing  
a kernel driver application and  
a bridge driver  
at a kernel layer  
loaded into a main memory of a computer,  
wherein  
the kernel driver application  
initiates requests and  
the bridge driver  
communicates requests  
with at least one user space application  
residing at a user space;  
at the kernel layer,  
receiving a request for processing from  
the kernel driver application;  
forwarding the request for processing

to a user space application;  
at the user space,  
receiving the request for processing;  
processing the request in  
the user space  
to generate a response  
based on the request; and  
communicating the response to  
the bridge driver at  
the kernel layer.

3. The method of Claim 1, wherein  
the bridge driver  
opens a communications channel between  
the kernel layer and  
the user space.

***Examiner's Statement of Reasons for Allowance***

3. Claims 1-3, 6-9, 12-16, 19-24, 41-45 and 48 are allowed over prior art.
4. This action is in reply to applicant's correspondence of 12 March 2008.
5. The following is an examiner's statement of reasons for the indication of allowable claimed subject matter.

6. As per claims 1, 12 and 41 generally, none of the prior art references of record--including but not limited to Bershad, B., et al, 'SPIN – An Extensible Microkernel for Application-specific Operating System Services', Dept. of Computer Science & Engineering FR-35, Univ. of Washington, Seattle, WA 98195, Technical Report 94-03-03, Feb. 28, 1994, entire document, <http://www.cs.cornell.edu/People/egs/papers/spin-tr94-03-03.pdf> ('Bershad et al'), as well as the other references; anticipate, disclose, teach or suggest, alone, or in combination, at the time of the invention, the features as discussed and remarked upon in the response of 12 March 2008 to office action of 31 December 2007 of the inventions as set forth in the claims in this application as allowed, and not necessarily as summarized and/or characterized by the examiner, whether or not as italicized, in the Examiner's Statement of Reasons for Allowance.

Specifically, (as per claim 1, for example) prior art dealing with augmenting present operating system kernel architectures so as to enhance flexibility/performance via extensibility and re-configurability, is generally known to exist per se, (i.e., Kea type operating systems that allow for extensibility and dynamic re-configurability, via specific IPC mechanisms that are responsible for the services extensions and reconfiguration aspects of the OS; Veitch, A., et al, 'Kea- A Dynamically Extensible and Configurable Operating System Kernel', Dept. of CS, Univ. of British Columbia, 1996, entire document, [http://www.hpl.hp.co.uk/personal/Alistair\\_Veitch/papers/iccds96/iccds96.pdf](http://www.hpl.hp.co.uk/personal/Alistair_Veitch/papers/iccds96/iccds96.pdf)). However, nowhere in the prior art is found collectively the *italicized* claim elements (i.e., the various claimed combinations of originating the request for kernel augmented services, the memory spaces designated to perform the processing required after loading, the path of communications between the OS kernel and request originator, and the nature of software data structures used for the various aspects of the method implementation (i.e., *kernel driver application* and *bridge driver communications to/from a user space application*, versus general software, or other dissimilar

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component constructs)), at the time of the invention; serving to patently distinguish the invention from said prior art;

“1. A method of **supporting a kernel** comprising:

*implementing*

*a kernel driver application and*

*a bridge driver*

*at a kernel layer*

*loaded into a main memory of a computer,*

wherein

*the kernel driver application*

*initiates requests and*

*the bridge driver*

*communicates requests*

*with at least one user space application*

*residing at a user space;*

*at the kernel layer,*

*receiving a request for processing from*

*the kernel driver application;*

*forwarding the request for processing*

*to a user space application;*

*at the user space,*

receiving the request for processing;

*processing the request in*

*the user space*

to *generate a response*

*based* on the request; and

*communicating the response to*

*the bridge driver at*

*the kernel layer.”*

7. Dependent claims 2, 3, 6-9, 13-16, 19-24, 42-45 and 48 are allowable by virtue of their dependencies.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from examiner should be directed to Ronald Baum, whose telephone number is (571) 272-3861, and whose unofficial Fax number is (571) 273-3861 and unofficial email is Ronald.baum@uspto.gov. The examiner can normally be reached Monday through Thursday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid, can be reached at (571) 272-4063. The Fax number for the organization where this application is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. For more information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ronald Baum

Patent Examiner

/R. B./

Examiner, Art Unit 2139

/Christian LaForgia/

Primary Examiner, Art Unit 2139